

CLAIMS

What is claimed is:

1. A blade to hold a wafer in a PVD tool, comprising:

a substantially flat portion defining a pocket to receive the wafer and to self-align the wafer on the blade.

2. The blade of claim 1, wherein a gap between an outer periphery of the pocket and an outer periphery of the wafer is large enough to accommodate a thermal expansion of the wafer while in the PVD tool.

3. The blade of claim 1, wherein a gap between an outer periphery of the pocket and an outer periphery of the wafer is small enough to self-correct an improper placement of the wafer on the blade by the PVD tool.

4. The blade of claim 1, wherein a diameter of the pocket is approximately 7.408 inches +/- 0.005".

5. An physical vapor deposition apparatus comprising:

a first robot;

a blade on the first robot, the blade including a pocket to receive a wafer and self-correct a positioning error of the wafer in the pocket; and

a first chamber to receive the wafer from the blade and deposit a first metal on the received wafer.

6. The apparatus of claim 5, further comprising a second robot to receive the wafer from an outside and transfer the received wafer to the blade, wherein the positioning error is due to the transfer.
7. The apparatus of claim 5, further comprising a second chamber to deposit a second metal on the wafer, wherein the first robot picks up the first metal deposited wafer from the first chamber and transfers the picked up wafer to the second chamber, and the positioning error is due to the pick up.
8. The apparatus of claim 7, wherein the first and second chambers each comprise an electrostatic chuck to accommodate the wafer during the first and second metal depositions.
9. The apparatus of claim 8, wherein the first and second metals are aluminum.
10. The apparatus of claim 5, wherein a diameter of the pocket is approximately 7.408 inches.
11. The apparatus of claim 5, wherein the blade is formed of aluminum with a nickel plating.
12. The apparatus of claim 5, wherein the blade defines a calibration hole therein.
13. The apparatus of claim 5, further comprising a wafer sensor to emit a beam to detect the wafer, wherein the blade further defines a wafer sensor hole therein to receive the

emitted beam.

14. A method, comprising:

transferring a wafer from a first robot to a blade having a pocket on a second robot; and
self-correcting a positioning error of the wafer on the blade due to the transferring with
the pocket.

15. The method of claim 14, further comprising:

transferring the wafer from the blade to an electrostatic chuck in a first chamber; and
depositing a first metal on the wafer in the first chamber.

16. The method of claim 15, wherein the depositing of the first metal comprises:

heating the wafer with the electrostatic chuck; and
applying a voltage to the wafer to hold the wafer in place on the electrostatic chuck.

17. The method of claim 16, wherein the heating comprises heating the wafer to a
reflow temperature of the first metal.

18. The method of claim 17, wherein the first metal at the reflow temperature does
not stick to the electrostatic chuck due to the self-correcting of the positioning error.

19. The method of claim 16, further comprising:

picking up the first metal deposited wafer from the first chamber with the blade; and
self-correcting a positioning error of the wafer on the blade due to the picking up with the
pocket.

20. The method of claim 19, further comprising:
transferring the picked up wafer to a second chamber; and
depositing a second metal on the blade in the second chamber.